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Qualcomm /Norton Rose Fulbright US LLP
2200 Ross Avenue
Suite 3600
Dallas, TX 75201-7932

EXAMINER
SHAPIRO, LEONID

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte SHAWN R. GETTEMY

Appeal 2016-004803
Application 12/011,471[1]
Technology Center 2600

Before BRADLEY W. BAUMEISTER, BRUCE R. WINSOR, and MICHAEL J. ENGLE, *Administrative Patent Judges*.

ENGLE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134(a) from a final rejection of claims 9–11, 13, 14, and 16–21, which are all of the claims pending in the application. Final Act. 2–3. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

Technology

The application relates to a "pliable sensor that is supported by the housing" and "provides input from the hand of a user." Abstract.

Illustrative Claim

Claim 9 is illustrative and reproduced below with the limitations at issue emphasized:

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[1] Appellant states the real party in interest is Qualcomm Inc. App. Br. 2.

9. A cellular telephone comprising:
a housing;
cellular telephone electronics;
a processor; and
a sensor to provide signals to the processor based on a force applied to the sensor by a user and *to provide tactile feedback to the user in response to the force, the tactile feedback provided as a protrusion formed as a bump at a location of the force detected by the sensor.*

Rejections

Claims 9–11 and 16–17 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Rafii et al. (US 6,512,838 B1) and Kornbluh et al. (US 6,586,859 B2). Final Act. 3.

Claims 13, 14, and 18–21 stand rejected under 35 U.S.C. § 103(a) as obvious over the combination of Rafii, Kornbluh, and Fishkin et al. (US 6,160,540). Final Act. 7.

ISSUES

Did the Examiner err in finding the combination of Rafii and Kornbluh teaches or suggests the following limitations:

1. "a sensor . . . to provide tactile feedback to the user in response to the force, the tactile feedback provided as a protrusion formed as a bump at a location of the force detected by the sensor," as recited in claim 9?
2. "the force sensor to . . . in response to the sensing, provide at least one protuberance of the force sensor in the form of a bump formed by an electrical charge," as recited in claim 16?
3. "the force sensor to provide a button in response to the tactile input," as recited in claim 17?

ANALYSIS

Claims 9–11, 13, 14, 16, and 18–21

Claim 9 recites "a sensor . . . to provide tactile feedback to the user in response to the force, the tactile feedback provided as a protrusion formed as a bump at a location of the force detected by the sensor."

The Examiner relies on Rafii for teaching a cellular phone with "a bump at a location of the input" (specifically, a virtual keyboard) and relies on Kornbluh for teaching "to provide tactile feedback to the user in response to the force, the tactile feedback provided as a protrusion at a location of the force detected by the sensor" (such as a stuffed animal that wiggles its nose when the nose is touched). Final Act. 4–5.

Appellant contends Raffi discloses only a "passive bump" that is "permanently present" and Kornbluh's wiggling of the nose is not a bump. App. Br. 8–9. However, we agree with the Examiner that "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references." *In re Keller*, 642 F.2d 413, 426 (CCPA 1981). Rafii is not used for tactile feedback in response to a touch; Kornbluh is. Conversely, Kornbluh is not used for a bump; Rafii is.

We are not persuaded by Appellant's argument that a combination of Rafii and Kornbluh would only teach "a sensor with permanent formed bumps," particularly given such permanent bumps would eliminate Kornbluh's teaching that "the present invention provides tactile interaction with its environment," such as "a teddy bear that reactively pushes back when its paw is pushed" or "the nose wiggles when touched." Kornbluh 26:1–17. We also are not persuaded the combination would change the principle of operation of Rafii, as Appellant suggests. App. Br. 10. Merely

because there is a "difference" between two prior art references does not necessarily affect the "principle of operation." *In re Mouttet*, 686 F.3d 1322, 1332 (Fed. Cir. 2012).

Independent claim 16 recites language commensurate with that of claim 9 and further recites the bump is "formed by an electrical charge." The Examiner relies on Kornbluh for this limitation. Final Act. 6 (citing Kornbluh 26:1–22). Kornbluh teaches "haptic sensors may be arranged under the skin in various places of the animated device" and "may then be responsible for actuation in response to user interaction." Kornbluh 26:3–8. "For example, a haptic *electroactive* polymer sensor may be placed in the nose of the stuffed toy and the nose wiggles when touched (*via actuation of the electroactive polymer*)." *Id.* at 26:8–11 (emphasis added). Thus, we are unpersuaded by Appellant's argument that Kornbluh's tactile feedback from an electroactive actuator is not "formed by an electrical charge."

Accordingly, we sustain the Examiner's rejection of independent claims 9 and 16, as well as dependent claims 10 and 11, which Appellants do not argue separately. App. Br. 14; *See* 37 C.F.R. § 41.37(c)(1)(iv).

We likewise sustain the Examiner's rejection of dependent claims 13, 14, and 18–21 over Rafii, Kornbluh, and Fishkin. Appellants have not particularly pointed out errors in the Examiner's reasoning regarding the additional teachings of Fishkin, and merely reiterate the same arguments set forth for independent claims 9 and 16. *See* App. Br. 15.[2]

[2] In the event of further prosecution, the Examiner may also wish to consider prior art related to haptic feedback in mobile devices, such as Rosenberg et al. (US 7,592,999; Sept. 22, 2009), Diederiks (US 2005/0030292; Feb. 10, 2005), or Tsuji et al. (JP 11-212725; Aug. 6, 1999), as well as haptic displays, such as Newman (US 6,502,032; Dec. 31, 2002).

Claim 17

Claim 17 depends from claim 16 and further recites "the force sensor to provide a button in response to the tactile input."

Appellant argues "*Rafii* teaches passive bumps which are permanently formed on a virtual keyboard" and "such permanently formed [bumps] cannot be provided **in response to the tactile input**." App. Br. 14–15.

However, the feature relied on by Appellant comes from independent claim 16, not dependent claim 17. As discussed above, for independent claim 16, the Examiner relies on Kornbluh for teaching "in response to the sensing, provide at least one protuberance of the force sensor." Final Act. 6. For dependent claim 17, the Examiner further relies on Rafii for teaching a button. *Id.* at 7 (citing Rafii 9:30–35). Thus, the feature relied upon by Appellant (i.e., the protuberance "in response to the tactile input") comes from Kornbluh, not Rafii. Yet Appellant attacks only Rafii, not Kornbluh. Just as with the independent claims, "one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references." *Keller*, 642 F.2d at 426.

Accordingly, we sustain the Examiner's rejection of claim 17.

DECISION

For the reasons above, we affirm the Examiner's decision rejecting claims 9–11, 13, 14, and 16–21.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED